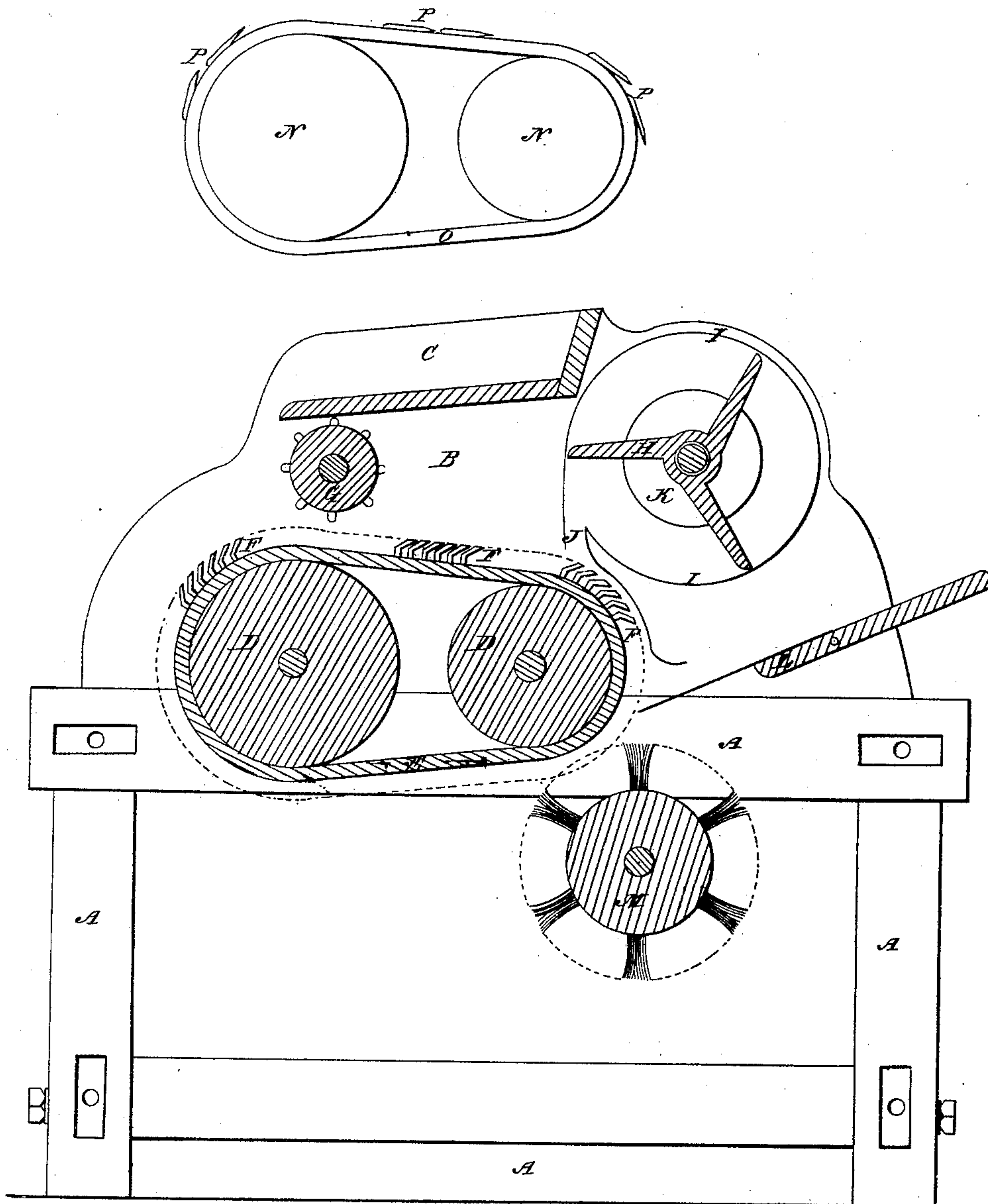


C. SPEER.  
GINNING AND CLEANING COTTON.

No. 11,795.

Patented Oct. 10, 1854.



Section 1.

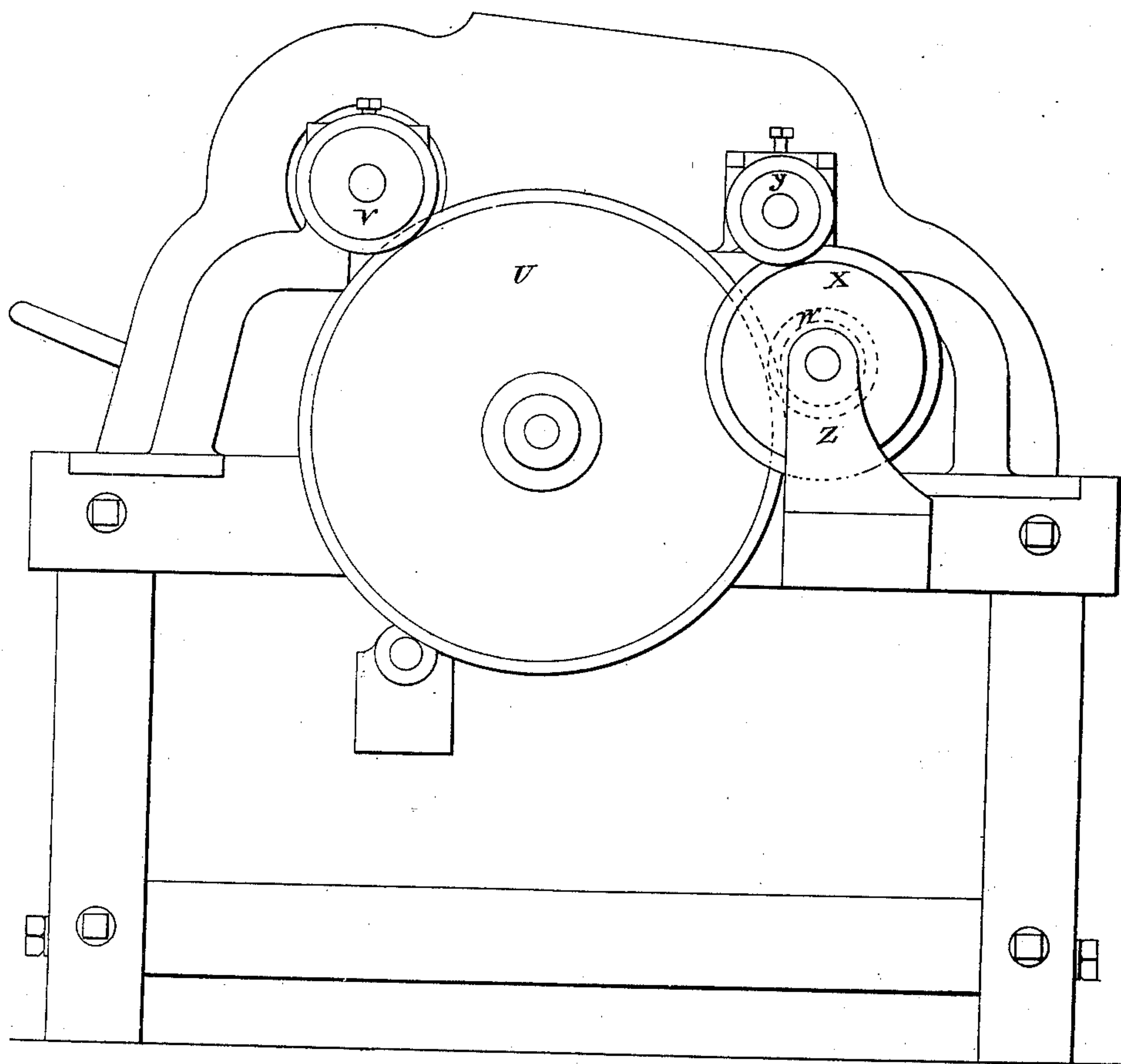
Witnesses.  
*Dir. Clarke*  
*Munson Sigler*

Inventor.  
*Cornelius Spear*

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Section 2.

Witnesses.

*D. W. Blake*  
*Munson Sigler*

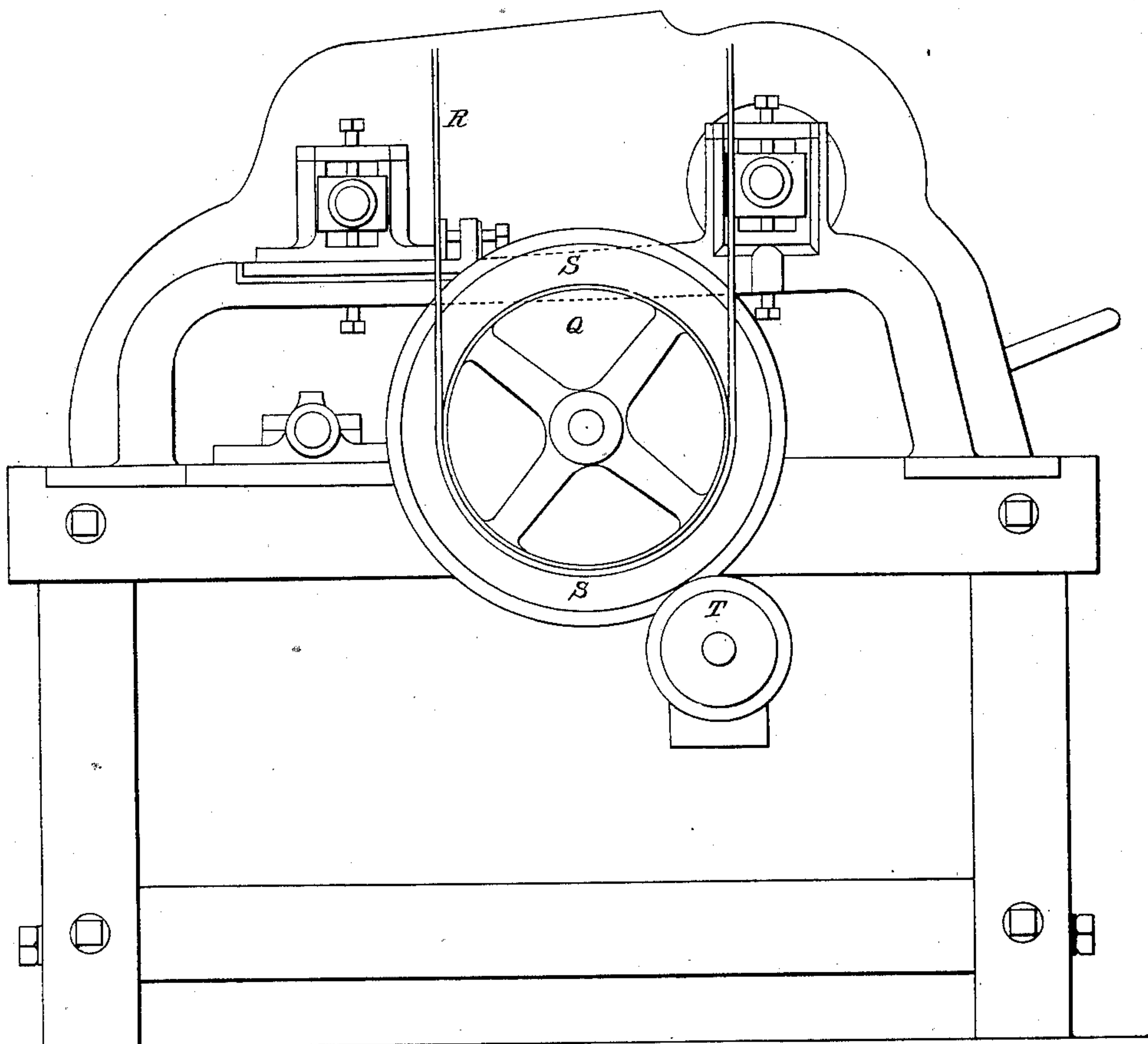
Inventor:  
*Cornelius Speer*

3 Sheets—Sheet 3.

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Witnesses

*D. W. Clarke*  
*Minnow Sigler*

Section 3.

Inventor.

*Charles Spear*



# UNITED STATES PATENT OFFICE.

CORNELIUS SPEER, OF NEW YORK, N. Y.

## IMPROVEMENT IN GINNING AND CLEANING COTTON.

Specification forming part of Letters Patent No. 11,795, dated October 10, 1854.

*To all whom it may concern:*

Be it known that I, CORNELIUS SPEER, of the city of New York, in the State of New York, have invented a new and useful Machine for Ginning and Cleansing Cotton and Burring and Cleansing Wool, which I denominate "a finger-picking gin;" and I hereby declare that the following is a full, clear, and exact description of the construction and operation of the same, reference being had to the annexed drawings, making part of this specification, in which—

Section 1 represents an interior side view of the machine. The letters A A A A represent a wooden frame secured by bolts or screws, on which the stands, pedestals, and moving portions of the machine rest; B, a side covering of a machine, (supposed in this view to be removed;) C, a box for holding the fiber to be cleansed before reaching the teeth F, (and which may also be adjusted in the rear of the machine;) D D, rollers varying in diameter, around which an endless belt or chain, E, revolves, said belt or chain E being set with metal teeth throughout its whole surface, as is shown in the three sections of teeth marked F, which open on the circle of the largest roller D, close when approaching a straight line, and so remain until reaching the circle of the smaller roller D, when the teeth again open a wider space between their points than upon the circle of the larger roller. The use of this particular movement of the teeth in passing around the rollers D D is to receive the fiber while the teeth are open at the large roller, excluding seeds, motes, and foreign substances, closing of the teeth when approaching a straight line before coming under the beater-roller G, holding the fiber securely while in a straight line, and opening wider upon the circle of the small roller D, to release the fiber from the teeth when acted upon by a current of air from the fan H through the opening J, which drives the fiber from the teeth out of the machine over the mote-board L. G is a beater-roller revolving in opposite direction to the teeth F, having its surface furnished with small projecting ribs attached thereto in spiral direction, which roller sets across the straight or flat portion of the endless belt where the teeth are all closed, this portion of the belt serving as a level or flat table upon which the beater-roller acts to drive back and separate from the fiber

while held by the closed teeth the seeds, motes, and other substances. Thus the ginning operation is performed upon the closed teeth before the fiber leaves the band and without the aid of any other roller, wheel, or beater, or any other machinery, except that used for removing the fiber from the teeth after it is thus cleaned. H is a fan-blower partly inclosed at the ends and revolving within a metal case, I I; K, an opening at each end of the fan to admit air which is forced out through the passage J; L, an adjustable mote-board over which the fiber passes out of the machine; M, a circular brush with its surface revolving in the same direction with the teeth F and at greater surface-speed, to cleanse them from dirt, gum, and other substances. N N represent the same rollers in the machine as before referred to by letters D D; O, a belt or chain, (similar to that before referred to, marked E,) furnished throughout its surface with metal combs attached to it by rivets or screws, which, in the movement of the belt or chain, open, close, and open again, as shown at P P P, and in a manner similar to the opening and closing of the teeth F F F. Each of the above descriptions of belt or chain (one with teeth and the other with combs) may be used at will in the operation of the machine, the one with combs being thought most suitable for coarse fiber of cotton or wool, the principle and process and effect of opening and closing being the same in both.

Sections 2 and 3 in the drawings represent outside views of Section 1 on opposite sides. In Section 3, Q represents the main driving-pulley, secured on the shaft of the small roller D, Section 1, which drives the large roller D by the belt E, the centers of the large roller D being adjustable to suit a variation in the tension of the belt E; R, the main driving-belt; S S, a plate-wheel secured on the same shaft with the pulley Q, driving the pinion T on the shaft of the brush-roller M, Section 1. (The machine may be driven either by gearing or belts.) In Section 2, U represents a plate-wheel, secured to the opposite end of the small roller D, Section 1, driving the change-pinion W upon a stud-wheel, X, which connects with the pinion Y on the shaft of the beater-roller G, Section 1; V, a pinion on the end of the fan-shaft H, Section 1, driven by the plate-wheel U; W, a change-pinion secured to the hub of

the plate-wheel X, and is driven by the plate-wheel U; X, a plate stud-wheel revolving on a stationary iron pin secured to the stand Z; Y, a pinion secured to the shaft of the beater-roller G, Section 1, and is driven by the plate-wheel X.

I do not claim the endless belt revolving around two or more rollers furnished with teeth or combs, as described, nor any part thereof; but

What I do claim, and desire to secure by Letters Patent of the United States, is—

The combination of such endless belt or chain

with the roller-beater G, the said roller-beater G being placed so as to work directly upon the flat or closed portion of such belt or chain while its closed teeth holds the fiber, thus performing the whole separating process without the intervention of any other machinery other than that of feeding and clearing the machine, as described.

CORNELIUS SPEER.

Witnesses:

D. W. CLARKE,  
MUNSON SIGLER.